General

Guideline Title

American Academy of Orthopaedic Surgeons clinical practice guideline on the treatment of pediatric supracondylar humerus fractures.

Bibliographic Source(s)

American Academy of Orthopaedic Surgeons (AAOS). American Academy of Orthopaedic Surgeons clinical practice guideline on the treatment of pediatric supracondylar humerus fractures. Rosemont (IL): American Academy of Orthopaedic Surgeons (AAOS); 2011. 229 p. [65 references]

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

Definitions of the strength of recommendations (Strong, Moderate, Weak, Inconclusive, and Consensus) are provided at the end of the "Major Recommendations" field.

Note from the American Academy of Orthopaedic Surgeons (AAOS): The following is a summary of the recommendations in the AAOS' clinical practice guideline, The Treatment of Pediatric Supracondylar Humerus Fractures. This summary does not contain rationales that explain how and why these recommendations were developed nor does it contain the evidence supporting these recommendations. All readers of this summary are strongly urged to consult the full guideline and evidence report for this information. AAOS is confident that those who read the full guideline and evidence report will see that the recommendations were developed using systematic evidence-based processes designed to combat bias, enhance transparency, and promote reproducibility.

This summary of recommendations is not intended to stand alone. Treatment decisions should be made in light of all circumstances presented by the patient. Treatments and procedures applicable to the individual patient rely on mutual communication between guardian and physician as well as other healthcare practitioners.

1. The work group suggests nonsurgical immobilization of the injured limb for patients with acute (e.g., Gartland Type I) or non displaced pediatric supracondylar fractures of the humerus or posterior fat pad sign.
   Strength of Recommendation: Moderate
2. The work group suggests closed reduction with pin fixation for patients with displaced (Gartland Type II and III, and displaced flexion) pediatric supracondylar fractures of the humerus.
   Strength of Recommendation: Moderate

3. The practitioner might use two or three laterally introduced pins to stabilize the reduction of displaced pediatric supracondylar fractures of the humerus. Considerations of potential harm indicate that the physician might avoid the use of a medial pin.
   Strength of Recommendation: Weak

4. The work group cannot recommend for or against using an open incision to introduce a medial pin to stabilize the reduction of displaced pediatric supracondylar fractures of the humerus.
   Strength of Recommendation: Inconclusive

5. The work group is unable to recommend for or against a time threshold for reduction of displaced pediatric supracondylar fractures of the humerus without neurovascular injury.
   Strength of Recommendation: Inconclusive

6. The practitioner might perform open reduction for displaced pediatric supracondylar fractures of the humerus with varus or other malposition after closed reduction.
   Strength of Recommendation: Weak

7. In the absence of reliable evidence, the opinion of the work group is that emergent closed reduction of displaced pediatric supracondylar humerus fractures be performed in patients with decreased perfusion of the hand.
   Strength of Recommendation: Consensus

8. In the absence of reliable evidence, the opinion of the work group is that open exploration of the antecubital fossa be performed in patients who have absent wrist pulses and are underperfused after reduction and pinning of displaced pediatric supracondylar humerus fractures.
   Strength of Recommendation: Consensus

9. The work group cannot recommend for or against open exploration of the antecubital fossa in patients with absent wrist pulses but with a perfused hand after reduction of displaced pediatric supracondylar humerus fractures.
   Strength of Recommendation: Inconclusive

10. The work group is unable to recommend an optimal time for removal of pins and mobilization in patients with displaced pediatric supracondylar fractures of the humerus.
    Strength of Recommendation: Inconclusive

11. The work group is unable to recommend for or against routine supervised physical or occupational therapy for patients with pediatric supracondylar fractures of the humerus.
    Strength of Recommendation: Inconclusive

12. The work group is unable to recommend an optimal time for allowing unrestricted activity after injury in patients with healed pediatric supracondylar fractures of the humerus.
    Strength of Recommendation: Inconclusive

13. The work group is unable to recommend optimal timing of or indications for electrodiagnostic studies or nerve exploration in patients with nerve injuries associated with pediatric supracondylar fractures of the humerus.
    Strength of Recommendation: Inconclusive

14. The work group is unable to recommend for or against open reduction and stable fixation for adolescent patients with supracondylar fractures of the humerus.
    Strength of Recommendation: Inconclusive

Definitions:

Levels of Evidence: See the "Rating Scheme for the Strength of the Evidence" field.

Strength of Recommendation

Guideline Language	Strength of Recommendation	Description of Evidence
The work group *recommends*	Strong	Evidence from two or more "High" strength studies with consistent findings for recommending for or against the intervention.

Guideline Language	Strength of Recommendation	Description of Evidence
The work group *suggests*	Moderate	Evidence from two or more "Moderate" strength studies with consistent findings, or evidence from a single "High" quality study for recommending for or against the intervention.
The Practitioner *might*	Weak	Evidence from two or more "Low" strength studies with consistent findings, or evidence from a single study for recommending for against the intervention or diagnostic.
The work group *is unable to recommend for or against*	Inconclusive	The evidence is insufficient or conflicting and does not allow a recommendation for or against the intervention.
In the absence of reliable evidence, the *opinion* of the work group is*	Consensus*	There is no supporting evidence. In the absence of reliable evidence, the work group is making a recommendation based on their clinical opinion considering the known harms and benefits associated with the treatment.

*Consensus based recommendations are made according to specific criteria. These criteria can be found in Appendix VII of the original guideline document.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Pediatric supracondylar fractures of the humerus

Guideline Category

Evaluation

Management

Rehabilitation

Treatment

Clinical Specialty

Emergency Medicine

Family Practice

Orthopedic Surgery

Pediatrics

Physical Medicine and Rehabilitation

Sports Medicine

Intended Users

Physicians

Guideline Objective(s)

- To help physicians improve the treatment of supracondylar fractures of the humerus in children based on the current best evidence
- To guide qualified physicians through a series of treatment decisions in an effort to improve the quality and efficiency of care
- To serve as an information resource for decision makers and other developers of clinical practice guidelines
- To assist physicians in describing, to patients and others, why the chosen treatment represents the best available course of action

Target Population

Children (age ≤18 years who have not yet reached skeletal maturity) with a diagnosis of supracondylar fracture of the humerus

Note: The guideline is not intended for use in pediatric patients who present with additional coexisting injuries that require formal surgical intervention or other life-threatening conditions that take precedence over the treatment of the supracondylar fracture of the humerus.

Interventions and Practices Considered

1. Nonsurgical immobilization of the injured limb
2. Closed reduction with pin fixation
3. Use of two or three laterally introduced pins to stabilize the reduction of displaced fractures
4. Open reduction for displaced fractures with varus or other malposition after closed reduction
5. Emergent closed reduction of displaced fractures in patients with decreased perfusion of the hand
6. Open exploration of the antecubital fossa in patients who have absent wrist pulses and are underperfused after reduction and pinning

Note: No recommendation could be made for or against the following interventions: Using an open incision to introduce a medial pin to stabilize reductions; a time threshold for reduction of displaced fractures without neurovascular injury; open exploration of the antecubital fossa in patients with absent wrist pulses but with a perfused hand after reduction; an optimal time for removal of pins and mobilization in patients with displaced fractures; routine supervised physical or occupational therapy; optimal time for allowing unrestricted activity after injury in patients with healed fractures; optimal timing of or indications for electrodiagnostic studies or nerve exploration in patients with nerve injuries associated with fractures; open reduction and stable fixation for adolescent patients with supracondylar fractures of the humerus.

Major Outcomes Considered

- Pain
- Number of days to resume normal activities
- Regular use of analgesia
- Sleep interruption
- Infection
- Nerve injury
- Healing time
- Hyperextension
- Loss of motion (stiff elbow)
- Loss of reduction
- Functional status
- Cosmetic appearance
- Patient satisfaction

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Study Selection Criteria

The American Academy of Orthopaedic Surgeons (AAOS) work group developed *a priori* article inclusion criteria for their review. These criteria are the group's "rules of evidence" and articles that did not meet them are, for the purposes of this guideline, not evidence.

To be included in the systematic reviews (and hence, in this guideline) an article had to be a report of a study that:

- Study must be of supracondylar humeral fracture
- Article must be a full article report of a clinical study
- Study must appear in a peer-reviewed publication
- Study must be published in English
- Study must be published in or after 1966
- Study must be of humans
- ≥80% of the enrolled study population must be <12 years of age at the time of fracture (for all Recommendations except 14) For Recommendation 14, ≥80% of the enrolled study population must be >12 and <18.
- Study must not be an in vitro study
- Study must not be a biomechanical study
- Study must not have been performed on cadavers
- Study should have 10 or more patients per group
- All study follow up durations are included
- Study results must be quantitatively presented
- For any given follow-up time point in any included study, there must be ≥50% patient follow-up
- Retrospective non-comparative case series, medical records review, meeting abstracts, historical articles, editorials, letters, and commentaries are excluded
- Case series studies that give patients the treatment of interest AND another treatment are excluded
- Case series studies that have non-consecutive enrollment of patients are excluded
- All studies of "Very Low" strength of evidence are excluded

The work group did not include systematic reviews or meta-analyses compiled by others or guidelines developed by other organizations. These documents are developed using different inclusion criteria than those specified by the AAOS work group. Therefore they may include studies that do not meet the group's inclusion criteria. These documents were recalled if the abstract suggested they might provide an answer to one of the recommendations, and their bibliographies were searched for additional studies to supplement the systematic review.

Literature Searches

The AAOS work group attempted to make the searches for articles comprehensive. Using comprehensive literature searches ensures that the evidence considered for this guideline is not biased for (or against) any particular point of view.

The work group searched for articles published from January 1966 to July 29, 2010. Four electronic databases were searched: PubMed, EMBASE, CINAHL, and The Cochrane Central Register of Controlled Trials. Strategies for searching electronic databases were constructed by the AAOS Medical Librarian using previously published search strategies to identify relevant studies.

The work group supplemented searches of electronic databases with manual screening of the bibliographies of all retrieved publications. The group also searched the bibliographies of recent systematic reviews and other review articles for potentially relevant citations. All articles identified were subject to the study selection criteria.

The study attrition diagram in Appendix III in the original guideline document provides details about the inclusion and exclusion of the studies considered for this guideline. The search strategies used to identify these studies are provided in Appendix IV of the original guideline document.

Number of Source Documents

44 articles were considered for the recommendations

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

The American Academy of Orthopaedic Surgeons (AAOS) work group evaluated the quality of the data on each outcome using a domain-based approach. Such an approach is used by the Cochrane Collaboration. Unlike the Cochrane Collaboration's scheme (which is for studies with parallel control groups), the AAOS work group's scheme allows for evaluation of studies of all designs. The domains used are whether:

- The study was prospective (with prospective studies, it is possible to have an *a priori* hypothesis to test; this is not possible with retrospective studies.)
- The study was of low statistical power
- The assignment of patients to groups was unbiased
- There was sufficient blinding to mitigate against a placebo effect
- The patient groups were comparable at the beginning of the study
- The treatment was delivered in such a way that any observed effects could reasonably be attributed to that treatment
- Whether the instruments used to measure outcomes were valid
- Whether there was evidence of investigator bias

Each quality domain is addressed by one or more questions. These questions are shown in Appendix V, Table 76 of the original guideline document.

To arrive at the quality of the evidence for a given outcome, every quality domain for that outcome reported in any given study is initially judged as not having any flaws and, therefore, the quality of evidence for the effect of that treatment on that outcome is taken as "High." For all domains except the "Statistical Power" domain, if one or more questions addressing any given domain are answered "No" for a given outcome, that domain is said to have a flaw. A domain is also flawed if there are two or more "Unclear" answers to questions addressing that domain.

The work group's evaluation of the "Statistical Power" domain considers whether a study had high, moderate or low power. In doing so, the work group accounts for whether the results were statistically significant and for the number of patients in the statistical analysis performed on the outcome of interest. The details of these considerations are provided in Appendix V, Table 77 in the original guideline document.

Domain flaws lead to corresponding reductions in the quality of the evidence. The manner in which the work group conducted these reductions is shown in the table below.

Relationship between Quality and Domain Scores for Outcomes of Treatments

Number of Domains with No More Than One "Unclear" Answer	Strength of Evidence
0	High
1-2	Moderate
3-4	Low
>5	Very Low

Applicability

The applicability (also called "generalizability" or "external validity") of an outcome is one of the factors used to determine the strength of a recommendation. The work group categorizes outcomes according to whether their applicability is "High", "Moderate", or "Low." As with quality, the work group separately evaluate the applicability for each outcome a study reports. The applicability of a study is evaluated using the PRECIS instrument. This instrument is comprised of the 10 questions that are briefly described in Table 3 of the original guideline document. All 10 questions are asked of all studies, regardless of design. The questions are divided into four domains. These domains and their corresponding questions are given in Table 3 of the original guideline document.

Each study is assumed to have "High" applicability at the start, and applicability is downgraded for flawed domains as summarized in Table 4 of the original guideline document. A study's applicability is "High" if there is only one "Unclear" answer in one domain and the answers to all of the questions for all other domains is "Yes." A study's applicability is low if there is one "Unclear" answer in one domain and the answers to all of the questions for all other domains is "No." A study's applicability is "Moderate" under all other conditions.

Final Strength of Evidence

To determine the final strength of evidence for an outcome, the strength is initially taken to equal quality. An outcome's strength of evidence is increased by one category if its applicability is "High", and an outcome's strength of evidence is decreased by one category if its applicability is "Low." If an outcome's applicability is "Moderate", no adjustment is made to the strength of evidence derived from the quality evaluation.

Methods Used to Analyze the Evidence

Meta-Analysis

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Best Evidence Synthesis

The American Academy of Orthopaedic Surgeons (AAOS) work group included only the best available evidence for any given outcome addressing a recommendation. Accordingly, the work group first included the highest quality evidence for any given outcome if it was available. In the absence of two or more occurrences of an outcome at this quality, they considered outcomes of the next lowest quality until at least two or more occurrences of an outcome had been acquired. For example, if there were two "moderate" quality occurrences of an outcome that addressed a recommendation, the work group did not include "low" quality occurrences of this outcome.

Statistical Methods

When possible, the AAOS Clinical Practice Guidelines Unit recalculates the results reported in individual studies and compiles them to answer the recommendations. All statistical analysis conducted by the AAOS Clinical Practice Guidelines Unit is conducted using STATA 10.0. STATA was used to determine the magnitude, direction, and/or 95% confidence intervals of the treatment effect. For data reported as means (and associated measures of dispersion) the mean difference between groups and the 95% confidence interval was calculated and a two-tailed t-test of independent groups was used to determine statistical significance.

When published studies report measures of dispersion other than the standard deviation the value was estimated to facilitate calculation of the treatment effect. In studies that report standard errors or confidence intervals the standard deviation was back-calculated. In studies that only report the median, range, and/or size of the trial, we estimated the means and variances according to a published method. In some circumstances statistical testing was conducted by the authors and measures of dispersion were not reported. In the absence of measures of dispersion, the results of the statistical analyses conducted by the authors (i.e., the p-value) are considered as evidence. For proportions, the work group reports the proportion of patients that experienced an outcome along with the percentage of patients that experienced an outcome. The variance of the arcsine difference was used to determine statistical significance. P-values <0.05 were considered statistically significant.

The unit performed meta-analyses using the random effects method of DerSimonian and Laird. A minimum of four studies was required for an outcome to be considered by meta-analysis. Heterogeneity was assessed with the I-squared statistic. Meta-analyses with I-squared values less than 50% were considered as evidence. Those with I-squared larger than 50% were not considered as evidence for this guideline. All meta-analyses were performed using STATA 10.0 and the "metan" command. The arcsine difference was used in meta-analysis of proportions. In order to overcome the difficulty of interpreting the magnitude of the arcsine difference, a summary odds ratio is calculated based on random effects meta-analysis of proportions and the number needed to treat (or harm) is calculated. The standardized mean difference was used for meta-analysis of means and magnitude was interpreted using Cohen's definitions of small, medium, and large effect.

In this guideline, AAOS conducts meta-analysis on relatively low quality data. It is done to combat low power of individual studies; however, readers should remember that the data are still low quality and the meta-analyses do not increase the quality of the evidence.

Methods Used to Formulate the Recommendations

Expert Consensus (Nominal Group Technique)

Description of Methods Used to Formulate the Recommendations

This guideline and systematic review were prepared by the AAOS Treatment of Pediatric Supracondylar Fracture of the Humerus guideline work group with the assistance of the AAOS Clinical Practice Guidelines Unit in the Department of Research and Scientific Affairs at the AAOS (See Appendix I in the original guideline document).

To develop this guideline, the work group held an introductory meeting on October 4, 2009 to establish the scope of the guideline and the systematic reviews. Upon completing the systematic reviews, the work group participated in a two-day recommendation meeting on October 2 and 3, 2010 at which the final recommendations and rationales were edited, written and voted on. An initial draft was completed and submitted for peer review November 15, 2010.

Formulating Preliminary Recommendations

The work group began work on this guideline by constructing a set of preliminary recommendations. These recommendations specify [what] should be done in [whom], [when], [where], and [how often or how long]. They function as questions for the systematic review, not as final recommendations or conclusions. Preliminary recommendations are almost always modified on the basis of the results of the systematic review. Once established, these *a priori* preliminary recommendations cannot be modified until the final work group meeting, they must be addressed by the systematic review, and the relevant review results must be presented in the final guideline.

Full Disclosure Information

Each preliminary recommendation developed by the work group is addressed in this guideline. This is of critical importance because it ensures full disclosure of all the data the work group considered. It also prevents bias that could result from failure to make such disclosure.

Voting on the Recommendations

The recommendations and their strength were voted on using a structured voting technique known as the nominal group technique. Details of this technique are included in Appendix VII of the original guideline document. Voting on guideline recommendations was conducted using a secret ballot and work group members were blinded to the responses of other members. If disagreement between work group members was significant, there was further discussion to see whether the disagreement(s) could be resolved. Up to three rounds of voting were held to attempt to resolve disagreements. If disagreements were not resolved following three voting rounds, no recommendation was adopted. Lack of agreement is a reason that the strength for some recommendations can be labeled "Inconclusive."

Rating Scheme for the Strength of the Recommendations

To develop the strength of a recommendation, American Academy of Orthopaedic Surgeons (AAOS) staff first assigned a preliminary strength for each recommendation that took only the final strength of evidence (including quality and applicability) and the quantity of evidence (see table below). Work group members then modified the preliminary strength of the recommendation using the "Form for Assigning Strength of Recommendation (Interventions)" shown in Appendix VI of the original guideline document.

Strength of Recommendation

Guideline Language	Strength of Recommendation	Description of Evidence
The work group *recommends*	Strong	Evidence from two or more "High" strength studies with consistent findings for recommending for or against the intervention.
The work group *suggests*	Moderate	Evidence from two or more "Moderate" strength studies with consistent findings, or evidence from a single "High" quality study for recommending for or against the intervention.
The Practitioner *might*	Weak	Evidence from two or more "Low" strength studies with consistent findings, or evidence from a single study for recommending for against the intervention or diagnostic.
The work group *is unable to*	Inconclusive	The evidence is insufficient or conflicting and does not allow a recommendation for or

Guideline Language	Strength of Recommendation	Description of Evidence
In the absence of reliable evidence, the *opinion* of the work group is*	Consensus*	There is no supporting evidence. In the absence of reliable evidence, the work group is making a recommendation based on their clinical opinion considering the known harms and benefits associated with the treatment.

recommend for or against against the intervention

*Consensus based recommendations are made according to specific criteria. These criteria can be found in Appendix VII of the original guideline document.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Peer Review

The draft of the guideline and evidence report was peer reviewed for content. The work group nominated external specialty societies *a priori* to the development of the guideline that then chose content experts to review the document on their behalf. The physician members of the American Academy of Orthopaedic Surgeons (AAOS) Guidelines Oversight Committee and the Evidence Based Practice Committee also peer reviewed this document.

Peer review was accomplished using a structured peer review form (see Appendix VIII in the original guideline document). The structured review form requires all peer reviewers to declare their conflicts of interest. Peer reviewers may request that their name and corresponding contact information remain anonymous when the final document is published; however, all comments, corresponding conflicts of interest and AAOS responses will be made public with the guidelines if the AAOS Board of Directors approves the document.

The draft guideline was sent to eight review organizations of ten that were solicited. A total of thirty-seven reviewers including the members of the AAOS Guidelines Oversight Committee and Evidence-Based Practice Committee were forwarded the draft. Thirteen peer reviewers returned comments (see Appendix IX of the original guideline document). The disposition of all non-editorial peer review comments was documented and accompanied this guideline through the public commentary and the AAOS guideline approval process.

Public Commentary

After modifying the draft in response to peer review, the guideline was subjected to a thirty day period of "Public Commentary." Commentators consist of members of the AAOS Board of Directors (BOD), members of the AAOS Council on Research and Quality(CORQ), members of the Board of Councilors (BOC), and members of the Board of Specialty Societies (BOS). Based on these bodies, over 200 commentators had the opportunity to provide input into the development of this guideline. Of these, eighteen members received the document for review and four members returned public comments (see Appendix IX in the original guideline document).

The AAOS Guideline Approval Process

Following public commentary, the guideline draft is again modified by the AAOS Clinical Practice Guidelines Unit and work group members. If changes are made as a result of public comment, these changes are summarized and members providing commentary are notified that their input resulted in a change in the guideline.

This final guideline draft must be approved by the AAOS Evidence Based Practice Committee, the AAOS Guidelines Oversight Committee, the AAOS Council on Research and Quality, and the AAOS Board of Directors. Descriptions of these bodies are provided in Appendix II of the original guideline document.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is specifically stated for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate treatment of children with a supracondylar humerus fracture

Potential Harms

- Most treatments are associated with some known risks, especially invasive and operative treatments. Therefore, discussion of available treatments and procedures applicable to the individual patient rely on mutual communication between the patient and physician, weighing the potential risks and benefits for that patient.
- A particular concern when managing supracondylar humerus fractures is the potential for this fracture to cause vascular compromise of the limb, which can lead to long term loss of nerve and/or muscle function.
- Risks of exploratory surgery include infection, neurovascular injury, and stiffness.

Contraindications

Contraindications

- Contraindications vary widely based on the treatment administered. Therefore, discussion of available treatments and procedures applicable to the individual patient rely on mutual communication between the patient and physician, weighing the potential risks and benefits for that patient.
- Additional factors may affect the physician's choice of treatment including but not limited to associated injuries the patient may present with as well as the individual's co-morbidities, skeletal maturity, and/or specific patient characteristics including obesity.

Qualifying Statements

Qualifying Statements

- This Clinical Practice Guideline was developed by an American Academy of Orthopaedic Surgeons (AAOS) physician volunteer Work Group based on a systematic review of the current scientific and clinical information and accepted approaches to treatment and/or diagnosis. This Clinical Practice Guideline is not intended to be a fixed protocol, as some patients may require more or less treatment or different means of diagnosis. Clinical patients may not necessarily be the same as those found in a clinical trial. Patient care and treatment should always be based on a clinician's independent medical judgment, given the individual patient's clinical circumstances.
- Some drugs or medical devices referenced or described in this Clinical Practice Guideline may not have been cleared by the Food and Drug Administration (FDA) or may have been cleared for a specific use only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or device he or she wishes to use in clinical practice.
- This guideline should not be construed as including all proper methods of care or excluding methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding any specific procedure or treatment must be made in light of all circumstances presented by the patient and the needs and resources particular to the locality or institution.

Implementation of the Guideline

Description of Implementation Strategy

Guideline Dissemination Plans

The primary purpose of the present document is to provide interested readers with full documentation about not only the recommendations, but also about how the work group arrived at those recommendations. This document is also posted on the American Academy of Orthopaedic Surgeons (AAOS) website at http://www.aaos.org/research/guidelines/guide.asp .

Shorter versions of the guideline are available in other venues. Publication of most guidelines is announced by an Academy press release, articles authored by the work group and published in the Journal of the American Academy of Orthopaedic Surgeons, and articles published in AAOS Now. Most guidelines are also distributed at the AAOS Annual Meeting in various venues such as on Academy Row and at Committee Scientific Exhibits.

Selected guidelines are disseminated by webinar, an Online Module for the Orthopaedic Knowledge Online website, Radio Media Tours, Media Briefings, and by distributing them at relevant Continuing Medical Education (CME) courses and at the AAOS Resource Center.

Other dissemination efforts outside of the AAOS will include submitting the guideline to the National Guideline Clearinghouse and distributing the guideline at other medical specialty societies' meetings.

Implementation Tools

Foreign Language Translations

Patient Resources

Quick Reference Guides/Physician Guides

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

American Academy of Orthopaedic Surgeons (AAOS). American Academy of Orthopaedic Surgeons clinical practice guideline on the treatment of pediatric supracondylar humerus fractures. Rosemont (IL): American Academy of Orthopaedic Surgeons (AAOS); 2011. 229 p.

[65 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2011

Guideline Developer(s)

American Academy of Orthopaedic Surgeons - Medical Specialty Society

Source(s) of Funding

This Clinical Practice Guideline was funded exclusively by the American Academy of Orthopaedic Surgeons who received no funding from outside commercial sources to support the development of this document.

Guideline Committee

Treatment of Supracondylar Fractures Work Group

Composition of Group That Authored the Guideline

Work Group Members: Andrew Howard, MD (*Chair*); Kishore Mulpuri, MD (*Vice-Chair*); Mark F. Abel, MD; Stuart Braun, MD; Howard Epps, MD; Harish Hosalkar, MD; Charles T. Mehlman, DO, MPH; Susan Scherl, MD

Guidelines Oversight Chair: Michael Goldberg MD

American Academy of Orthopaedic Surgeons Staff: Charles M. Turkelson, PhD; Janet L. Wies, MPH; Kevin Boyer

Financial Disclosures/Conflicts of Interest

In accordance with American Academy of Orthopaedic Surgeons (AAOS) policy, all individuals whose names appear as authors or contributors to this Clinical Practice Guideline filed a disclosure statement as part of the submission process. All panel members provided full disclosure of potential conflicts of interest prior to voting on the recommendations contained within this Clinical Practice Guideline.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the American Academy of Orthopaedic Surgeons Web site .

Print copies: Available from the American Academy of Orthopaedic Surgeons, 6300 North River Road, Rosemont, IL 60018-4262. Telephone: (800) 626-6726 (800 346-AAOS); Fax: (847) 823-8125; Web site: www.aaos.org .

Availability of Companion Documents

The following is available:

- The treatment of pediatric supracondylar humerus fractures. Summary of recommendations. Rosemont (IL): American Academy of Orthopaedic Surgeons; 2011 Sep 23. 2 p. Electronic copies: Available in Portable Document Format (PDF) from the American Academy of Orthopaedic Surgeons (AAOS) Web site.

Print copies: Available from the American Academy of Orthopaedic Surgeons, 6300 North River Road, Rosemont, IL 60018-4262. Telephone: (800) 626-6726 (800 346-AAOS); Fax: (847) 823-8125; Web site: www.aaos.org.

Patient Resources

The following is available:

- Elbow fractures in children. Rosemont (IL): American Academy of Orthopaedic Surgeons. 2011 Nov. Available in English and Spanish from the American Academy of Orthopaedic Surgeons (AAOS) Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI Institute on March 13, 2012.

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NGC Disclaimer

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